Claims

1. A controller for controlling the flow of wort from a lauter tun, **characterized in that** the controller is a fuzzy controller.

2. A method of controlling the flow of wort (15) from a lauter tun (1), which comprises the following steps:

controlling a control valve (18) and a height of a raking machine (5) in dependence upon a difference between a desired wort flow and an actual wort flow, the control valve (16) being opened further and the raking machine (5) being lowered further if the desired wort flow is less than the actual wort flow and vice-versa;

reducing the desired wort flow if a further increase in the actual wort flow is not to be caused by further opening of the control valve (16) or lowering of the raking machine (5);

characterized in that

the desired wort flow and the height of the raking machine (5) are additionally adjusted in dependence upon the turbidity of the outflowing wort so that an increase in turbidity will result in a less substantial lowering of the raking machine and a lower desired wort flow.

3. A method according to claim 2, **characterized in that** the change with time of the position of the control valve (16) is additionally taken into account as an input variable, and that fast opening of the control valve (16) leads to a decrease in the desired wort flow and to a lowering of the raking machine.

4. A method according to claim 2 or 3, **characterized in that** the inflow of sparge water will be increased above the actual wort flow, if the actual wort flow remains below the desired wort flow during a second wort, and that the inflow of sparge water will be reduced as soon as the actual wort flow approaches the desired wort flow.

5. A method according to one of the claims 2 to 4, **characterized in that**, in addition, a level in a lauter vessel (19) will be lowered, if the actual wort flow remains below the desired wort flow, especially if the end of the lautering of a first wort is at hand.

6. A method according to one of the claims 2 to 5, **characterized in that** the sparge water quantity will be reduced in the case of easy-running brews.

7. A method according to one of the claims 2 to 6, **characterized in that**, for triggering a deep cut, the position of the control valve (16), the actual wort flow (15), the height of the raking machine (5) and the turbidity are taken into account.

8. A method according to one of the claims 2 to 7, **characterized in that,** if the raking machine (5) has not been moved below a certain level during the first wort, the raking machine (5) will be moved at least once to a low position during a second wort.

9. A method according to one of the claims 2 to 8, **characterized in that** the lautered amount of first wort will be reduced, if a brew runs poorly during lautering of the first wort.

10. A method according to one of the claims 2 to 9, **characterized in that** the poorer the second wort runs, the later will the trub be added during a second wort.

Legend of Fig. 2:

total wort: 350 hl
first wort: 150 hl
trub addition: 179 hl
sparge water: 172 hl
turbidity: 15 EBC

Legend of Fig. 3:

total wort: 350 hl
first wort: 147 hl
trub addition: 180 hl
sparge water: 179 hl
turbidity: 43 EBC

Legend of Fig. 4:

total wort: 350 hl
first wort: 146 hl
trub addition: 210 hl
sparge water: 171 hl
turbidity: 15 EBC

Legend of Fig. 5:

total wort: 350 hl
first wort: 150 hl
trub addition: 210 hl
sparge water: 171 hl
turbidity: 15 EBC

Legend of Fig. 6:

total wort: 350 hl
first wort: 150 hl
trub addition: 179 hl
sparge water: 180 hl
turbidity: 15 EBC

Legend of Fig. 7:

total wort: 250 hl
first wort: 143 hl
trub addition: 180 hl
sparge water: 180 hl
turbidity: 15 EBC

Legend of Fig. 8:

total wort: 350 hl
first wort: 149 hl
trub addition: 180 hl
sparge water: 179 hl
turbidity: 43 EBC

Legend of Fig. 9:

total wort: 350 hl
first wort: 150 hl
trub addition: 184 hl
sparge water: 180 hl
turbidity: 87 EBC